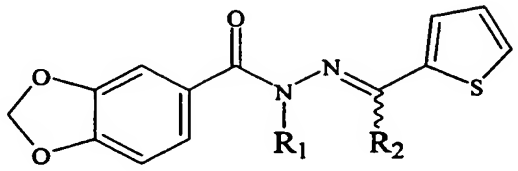
WHAT IS CLAIMED IS:

1. A chemical compound having the formula (I)

(I)



wherein,

R_1 is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms, unsubstituted phenyl, and substituted phenyl;

R_2 is selected from the group consisting of H, alkene, un-substituted phenol, and substituted phenyl; and

pharmaceutically acceptable salts thereof.

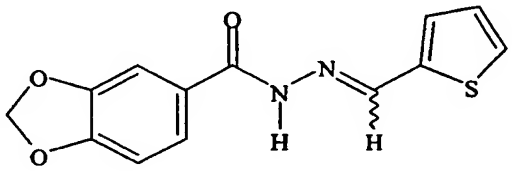
2. The chemical compound according to claim 1, wherein at least one of R_1 and R_2 is hydrogen.

3. The chemical compound according to claim 1, wherein R_1 is hydrogen.

4. The chemical compound according to claim 1, wherein R_2 is hydrogen.

5. The chemical compound of claim 1, wherein R_1 is hydrogen; and R_2 is hyrogen; the compound having formula (II):

(II)



and pharmaceutically acceptable salts thereof.

6. A method of preparing the chemical compound according to claim 5, comprising steps of:

contacting 3,4-methylenedioxybenzoylhydrazine with an equimolar amount of thiophene-2-carboxaldehyde; and

recovering the compound.

7. The method according to claim 6, wherein said thiophene-2-carboxaldehyde is in a solvent and a catalyst is used.

8. The method according to claim 7, wherein said solvent is ethanol and said catalyst is hydrochloric acid.

9. A method of treating a patient in need of treatment with a calcium sensitizer, comprising the step of administering a therapeutically effective amount of LASSBio-294.

10. The method of treating a patient according to claim 9, wherein the therapeutically effective amount of the compound is one that produces a plasma concentration of the compound of 1 μM to 100 μM.

11. The method of treating a patient according to claim 10, wherein the therapeutically effective amount is one that produces a plasma concentration of the compound of 10 μM to 50 μM.

12. The method of treating a patient according to claim 9, wherein the patent is one who is suffering from a heart condition.

13. The method of treating a patient according to claim 12, wherein the heart condition is selected from the group consisting of congestive heart failure and systolic dysfunction.

14. The method of treating a patient according to claim 9, wherein the patient is one who is suffering from muscle fatigue.

15. The method of treating a patient according to claim 14, wherein the patient suffering from muscle fatigue has a medical condition selected from the group consisting of HIV infection, cancer, major injury, sepsis, Crohn's disease, ulcerative colitis, chronic fatigue syndrome.

16. A pharmaceutical composition comprising the compound LASSBio-294 and pharmaceutically acceptable salts thereof.

17. The pharmaceutical composition of claim 16, further comprising pharmaceutically acceptable inactive ingredients, comprising diluents, carriers, solvents, disintregrants, lubricants, stabilizers, and coatings.

18. The pharmaceutical composition of claim 17, wherein the composition is formulated for oral administration.

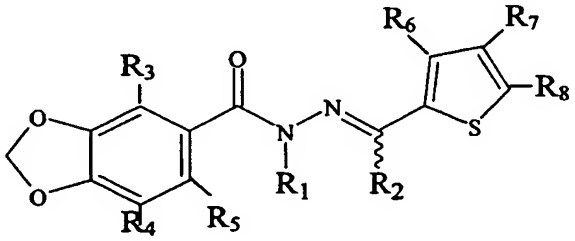
19. The pharmaceutical composition of claim 15, wherein the composition is formulated for parentral administration.

20. A chemical composition comprising LASSBio-294 and a second compound; said composition having the characteristic of producing at least 20% oral bioavailability of LASSBio-294 when taken orally by a patient.

21. The composition of claim 19 wherein the second compound is selected from the group consisting of dipeptides and tripeptides.

22. A pharmaceutical composition, comprising a compound of Claim 1 in combination with a pharmaceutically acceptable carrier.

23. A pharmaceutical composition, comprising a compound of formula (III)



in combination with a pharmaceutically acceptable carrier.